

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number  
**WO 2005/049425 A1**

(51) International Patent Classification<sup>7</sup>: **B64G 1/00**,  
5/00, F41F 3/04

(21) International Application Number:  
PCT/EP2004/012346

(22) International Filing Date: 31 October 2004 (31.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0325456.2 31 October 2003 (31.10.2003) GB

(71) Applicant and

(72) Inventor: DEMOLE, Frederic, Jean-Pierre [GB/GB]; 2  
Old Brompton Road, London SW7 3DQ (GB).

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

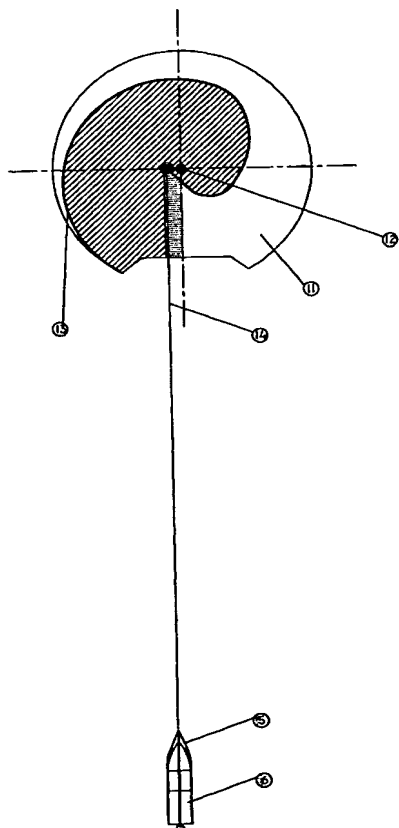
(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,

Published:  
— with international search report

[Continued on next page]

(54) Title: PAYLOAD LAUNCHING SYSTEM



(57) Abstract: This invention relates to a system for launching a payload. A rotating flywheel (11) accelerates a traditionally designed rocket (16) to a significant speed. Rotational energy from the flywheel (11) is transferred in the form of kinetic energy through a spiral surface and a cable (14) to the rocket (16). The system comprises a smaller rocket (16) carrying less fuel, provided with a smaller first stage engine. All other components of the system are re-used. This leads to a simpler and more efficient design of the rocket (16) and to a considerable reduction in launch costs.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*